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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/682,164

10/08/2003

Andrew W. Wilson

ADAPP166A

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11/26/2007

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EXAMINER

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ART UNIT

PAPER NUMBER

2182

MAIL DATE

DELIVERY MODE

11/26/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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# Office Action Summary

Application No.

10/682,164

Applicant(s)

WILSON ET AL.

Examiner

Tanh Q. Nguyen

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3,9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,9 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 1 is objected to because of the following informalities: "comprises" in line 12 of claim 1 should be replaced with --comprising-- for grammar.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 1-3, 9-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 recites "wherein a target software stack layer creates a second network stack interface, the second network stack interface comprises a second buffer descriptor for storing information and the memory address pointer of the first buffer descriptor...passes the second network stack interface to the another software stack layer" in lines 11-14. The claim is not enabled because the second network stack interface (e.g. 258, 260 - FIG. 6) comprises a second buffer descriptor (e.g. 272, 274 -

FIG. 6) that does not store information and the memory address pointer of the first buffer descriptor (e.g. 266, 268 - FIG. 6) - as the first buffer descriptor points to STP HDR (e.g. 140, 154 - FIG. 6) and the second buffer descriptor points to either SEP HDR (134, FIG. 6) or Data (e.g. 150, FIG. 6).

Note that the last two sentences of [0066] of the specification disclose the NIC layer creating NIC SIDs and passing the NIC SIDs to the transport layer (STP), and the transport layer utilizing the NIC SIDs to create STREAM SIDs. In a first interpretation, the sentences suggest the target software stack layer being the NIC driver layer, the second network stack interface being a NIC SID, and the another layer being the transport layer. In a second interpretation, the sentences suggest the network stack interface (or first network stack interface) being a NIC SID, the target software stack layer being the transport layer, and the second network stack interface being a STREAM SID. The first interpretation is not enabled because line 3 of the claim suggests **the another layer being different from the transport layer**, and the second interpretation is not enabled because “a target software stack layer” in line 11 suggests **a software stack layer that is different from either “a transport layer” or “another layer”** (as recited in line 3 of the claim). In view of claims 9-10 suggesting the network stack interface (or first network stack interface) being a NIC SID, the second interpretation more likely reflects the invention.

5. Claims 1-3, 9-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites "wherein the passing of the created second network stack interface to the another software stack layer references the information and memory address pointer of the first buffer descriptor for storage in the second buffer descriptor of the second network stack interface" in lines 18-22. The examiner cannot find support for such limitation. At best, the specification discloses "the passing of the created second network stack interface to the another software stack layer (SEP layer) for further processing" (last sentence of [0069]), the another software stack layer using the second network stack interface to obtain header data (first sentence of [0071]), and the another software stack layer modifying the second buffer descriptor to point to a data chunk or assigning a (pointer) value to a buffer descriptor of a third network stack interface (first sentence of [0074]). Applicant is required to specifically point out the support for the limitation by page(s), line number(s), drawing(s) and/or label(s) to overcome the rejection.

6. Claims 1-3, 9-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the network stack interface comprising: a first network stack interface". The claim is ambiguous because it is not clear how a network stack interface can comprise a first network stack interface. It appears that the first network stack interface is the network stack interface.

Claim 1 recites the limitation "the first target software stack layer" in line 13. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites "wherein the passing...references the information and memory address pointer of the first buffer descriptor for storage in the second buffer descriptor of the second network stack interface" in lines 18-22. It is not clear whether the information and the memory address pointer of the first buffer descriptor are to be stored in the second buffer descriptor of the second network stack interface, or the information and the memory address pointer of the first buffer descriptor are being referenced to for storage of something else in the second buffer descriptor of the second network stack interface. The specification appears to disclose storage of a modified buffer descriptor. Clarification and/or amendment are required.

Claim 1 recites "storing information and the memory address pointer of the first buffer descriptor" in lines 12-13, and suggests the information not being part of the first buffer descriptor. Claim 1 also recites "references the information and memory address pointer of the first buffer descriptor" in lines 20-21, and suggests the information being part of the first buffer descriptor. Clarification is required. Furthermore, it is not clear applicant intends to claim with information.

Claim 2 recites "wherein the header portion includes a common header portion and a layer specific header portion, the layer specific header portion defining characteristics utilized by a particular related network stack layer" in lines 1-3. Since the header portion is only previously recited in line 6 of claim 1, the header portion is the header portion of the network stack interface which corresponds to a NIC SID. The

header portion therefore defines characteristics utilized only by the NIC driver layer (i.e. not by a particular related software stack layer).

Claim 3 recites "wherein the buffer descriptor portion further includes buffer length data, the buffer length data defining a size for the data referenced by the memory address pointer" in lines 1-3. Since the memory address pointer is associated only with the first buffer descriptor (see claim 1), only the data buffer associated with the first buffer descriptor is referenced by the memory address pointer.

7. The rejections that follow are based on the examiner's best interpretation of the claims.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-3, 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Connery et al. (US 6,246,683).

10. As per claim 1, Conner teaches a network stack interface [FIG. 4; col. 6, line 58- col. 7, line 20] for communication between software stack layers [48, 50, 52, 54, 56 - FIG. 3] during network storage data transfer [col. 1, lines 6-10], wherein the network

stack interface is defined for communication between a transport layer [52, FIG. 3] and another layer [50 - FIG. 3] in the software stack layers, the network stack interface comprising:

a header portion [101, FIG. 4] and a first buffer descriptor [col. 7, lines 4-6], the header portion defining characteristics of the first network stack interface [103-106, FIG. 4] and the first buffer descriptor defining a data buffer [111, FIG. 4], the first buffer descriptor including a memory address pointer to the data buffer [col. 7, lines 4-6], the first buffer descriptor being one of a plurality of buffer descriptors [buffer descriptors for payload segments 102, 120, 130 - FIG. 4];

wherein a target software stack layer [50, FIG. 3] creates a second network stack interface [col. 7, lines 2-10], the second network stack interface comprises a second buffer descriptor for storing information and the memory address pointer of the first buffer descriptor [col. 7, lines 2-10], and first target software stack layer passes the second network stack interface to the another software stack layer [48, FIG. 3]; and

wherein the another software stack layer references the information and memory address pointer of the first buffer descriptor [col. 7, lines 2-10] for storage in a buffer descriptor of a network stack interface at the another software stack layer.

Note that Connery teaches comparison of the address of the data in the buffer descriptor with the address of the buffer into which a layer of the stack intends to copy the data [col. 7, lines 10-18] - hence a buffer descriptor at the transport layer including a memory address pointer to the data, a buffer descriptor at the file system layer including a memory address pointer to the data, and/or a buffer descriptor at the data application



layer including a memory address pointer to the data.

11. As per claim 2, Connery teaches the header portion including a common header portion [pointer to header buffer 110, SMB 106 - FIG. 4] and a layer specific header portion, the layer specific header portion defining characteristics utilized by an associated network stack layer [e.g. TCP 105, FIG. 4 for a transport layer].

12. As per claim 3, Connery teaches the buffer descriptor defining data including buffer length data, the buffer length data defining a size for the data referenced by the memory address pointer [col. 5, lines 5-6].

13. As per claim 9, Connery teaches the first buffer descriptor defining transport layer header data [transport layer 52 - FIG. 3 (see rejection of claim 1 above)].

### ***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

16. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Connery et al..

Connery does not teach the transport layer being STP. Since it was known in the art at the time the invention was made to use STP instead of TCP in LAN applications for efficiency, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use STP in LAN applications in order to efficiently transfer data.

**Examiner's note:** *Examiner has cited particular page, column and line number(s) in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. Applicant needs to consider the references in their entirety as potentially teaching all or part of the claimed invention.*

*In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and verification of the metes and bounds of the claimed invention.*

### **Response to Arguments**

17. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanh Q. Nguyen whose telephone number is 571-272-4154. The examiner can normally be reached on M-F 9:30AM-7:00PM.

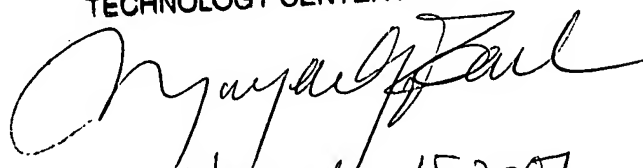
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alford Kindred can be reached on 571-272-4037. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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November 15, 2007

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November 15, 2007